



HPE DL385 Gen10 Hybrid NVMe SAS HDD Azure Stack HCI Solution

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Solution BOM/node
Version 1.0
HPE DL385 Gen10 8SFF
NVMe cache/SAS HDD capacity
Processor configurations 2.0 GHz or faster
Memory configurations from 64 GB to 4 TB
Minimum of 2 nodes with a cluster witness
Maximum of 16 nodes

| Item | Description | Part number | Quantity |
|--|--|--|-----------|
| Operating system | Windows Server® 2019 Datacenter (16 core) HPE recommends HPE OEM licenses | See Appendix for HPE OEM license options | 1 |
| Additional processor core licenses depend upon processor option | Windows Server 2019 Datacenter Additional License (2 cores) HPE recommends HPE OEM licenses | See Appendix for HPE OEM license options | Varies |
| Server | HPE DL385 Gen10 8SFF Configure-to-order Server | 878612-B21 | 1 |
| Processors | Any processor 2.0 GHz or faster. See HPE ProLiant DL385 Gen10 QuickSpecs for Processor Options | xxxxxx-L21 xxxxxx-B21 | 1 or 2 |
| Memory | Memory size must be between 64 GB and 4 TB. See HPE ProLiant DL385 Gen10 QuickSpecs for Memory Options | | |
| Network adapters | See network adapter options for FlexibleLOM and PCIe plug-in controllers | xxxxxx-B21 | 1 or more |
| OS boot (rear cage) | HPE 2TB 6G SATA 7.2K rpm SFF HDD | 765455-B21 | 2 |
| 2 SFF kit | HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit | 826687-B21 | 1 |
| Storage controllers | See storage controller options for modular and PCIe plug-in controllers | xxxxxx-B21 | 1 or more |
| NVMe riser kit | HPE DL38x Gen10 4-port 8 NVMe Slim SAS Riser | 867807-B21 | 1 |
| NVMe bay | HPE DL38x NVMe 8 SSD Express Bay | 826689-B21 | 1 |
| Fan kit | HPE DL38X Gen10 High Performance Temperature Fan Kit | 867810-B21 | 1 |
| Power supply | HPE 800W FS Plat Ht Plg LH Pwr Sply Kit | 865414-B21 | 2 |
| TPM | HPE TPM 2.0 Gen10 Kit | 864279-B21 | 1 |
| Rail kit | HPE 2U SFF Easy Install Rail Kit | 733660-B21 | 1 |
| HPE OneView | HPE OV w/o iLO 3yr 24x7 FIO Phys 1 LTU | P8B31A | 1 |
| HPE iLO Advanced | HPE iLO Adv Security Lic 3yr Support | BD505A | 1 |

| Option type | Description | Part number | Quantity |
|--|--|-------------|----------|
| Network FlexibleLOM | HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter | 817749-B21 | 1 |
| Network FlexibleLOM | HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter | 867334-B21 | 1 |
| Network adapter PCIe plug-in | HPE Ethernet 10Gb 2-port 521T Adapter | 867707-B21 | 1 |
| Network adapter PCIe plug-in | HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter | 817753-B21 | 1 |
| Network adapter PCIe plug-in | HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter | 867328-B21 | 1 |
| Network adapter PCIe plug-in | HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter | 825110-B21 | 1 |
| Network adapter PCIe plug-in | HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter | 825111-B21 | 1 |
| Storage controller modular | HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller | 804338-B21 | 1 |
| Storage controller modular | HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular Controller | 804326-B21 | 1 |
| Storage controller modular | HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller | 804331-B21 | 1 |
| Storage controller PCIe plug-in | HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller | 804394-B21 | 1 |
| Storage controller PCIe plug-in | HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller | 830824-B21 | 1 |



| Option type | Description | Part number | Quantity |
|--|---|----------------------|-----------|
| Storage controller PCIe plug-in | HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller | 804398-B21 | 1 |
| Storage controller PCIe plug-in | HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller | 804405-B21 | 1 |
| Storage SAS Expander | HPE DL38x Gen10 12Gb SAS Expander | 870549-B21 | 1 |
| Minimum drive size validated, equal or larger drive sizes may be used | | | |
| Cache NVMe | HPE 1.6TB NVMe x4 MU SFF SCN DS SSD | See guidelines below | 2 or more |
| Capacity HDD | HPE 600GB SAS 12G 10K SFF SC DS HDD | See guidelines below | 4 or more |

Cabling instructions can be found [here](#).

Configuration guidelines

- HPE P816i-a controller has 16 PCIe lanes allowing connection of up to 16 SAS or SATA drives. It is your perfect choice for achieving maximum Storage Spaces Direct I/O performance without the use of an SAS expander.
- The D3610/D3710 Enclosures are supported for adding additional SAS drives to this solution.
- OS boot drives must not reside on any Smart Array Controller containing Storage Spaces Direct drives.
- Storage Spaces Direct drives can only reside on a Smart Array Controller configured exclusively in HBA Mode.
- Storage Spaces Direct drives cannot reside on any Smart Array controller configured in either RAID or mixed mode (RAID logic drives and HBA physical drives simultaneously).
- Use of alternative size cache NVMe and capacity SAS SSD drives within this solution is permitted.
 - The cache must be configured with a minimum of 2 NVMe with a size greater than or equal to 1.6 TB.
 - The capacity must be configured with 4 or more SAS HDD drives with a size greater than or equal to 600 GB.
 - See [HPE ProLiant DL385 Gen10 QuickSpecs](#) for alternative drive options.
 - For more information on hardware requirements, see [Microsoft’s Storage Spaces Direct web doc—hardware requirements](#).
- Use of alternative boot drives other than what is specified in this configuration is supported. SDDC Premium AQ is not required for boot drives.
- Update this Azure Stack HCI Solution drivers and firmware for the smart arrays, network adapters, and storage drives using [Service Pack for ProLiant \(SPP\) Version 2018.11.0](#) or newer.

Appendix

Hewlett Packard Enterprise recommends cost-efficient HPE OEM Windows Server 2019 Datacenter licenses for a complete Azure Stack HCI® solution from hardware to operating system out of one hand. Alternatively, customer supplied Windows Server 2019 Datacenter licenses such as Volume License or Retail can also be used.

The HPE OEM Windows Server Core Licensing Calculator tool can assist you in calculating the number of required licenses: hpe.com/servers/windows-license-calculator.

HPE offers OEM Windows Server licenses in two distinct options and a wide range of languages:

- **Reseller Option Kit (ROK)**—Available through authorized HPE resellers at the time of purchase of an [HPE server system](#).
- **Direct from HPE factory**—Available for sale along with the purchase of your HPE server from the factory, you can select OEM Windows Server 2019 Datacenter as a **not preinstalled** (Npi) option (also referred to as **drop in the box** license).

In both the options, the OS media is included with the server.

For an updated list of available part numbers, see the [HPE OEM Windows Server 2019 OEM QuickSpecs](#).




Reference


[Microsoft Windows Server 2019 OEM from HPE](#)

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